February 7, 2002

Mr. Jeff Trockman
J. Trockman & Sons, Inc.
P.O. Box 682
Evansville, Indiana 47704

Dear Mr. Trockman:

Re: Exempt Operation Status,
163-15369-00123

The application from J. Trockman & Sons, Inc. received on December 31, 2001, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the scrap automobile metal body processing plant, located at 1017 Bayse Street, Evansville, Indiana 47714 has been re-classified from a FESOP source into an Exempted source. The source consists of the following emission units:

(a) Replacement of the two (2) 750 Horsepower natural gas-fired reciprocating internal combustion (IC) engines into electric engines. These IC engines are used to power the shredder.

(b) Shredding operation, capable of shredding a maximum of 24 tons per hour;

(c) Two (2) diesel storage tanks, identified as tank no.1 and tank no. 6, each with a capacity of 250 gallons;

(d) Five (5) diesel storage tanks, identified as tank no. 2, tank no. 3 and tank no. 4, tank no. 9 and tank no.10, each with a capacity of 1,000 gallons;

(e) One (1) gasoline storage tank, identified as tank no. 5 with a capacity of 500 gallons;

(f) One (1) used oil storage tank, identified as tank no.7 with a capacity of 500 gallons;

(g) One (1) diesel storage tank, identified as tank no. 8 with a capacity of 500 gallons;

(h) Brazing, torch cutting, soldering and welding operation.

The following conditions shall be applicable:

(1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

(2) Pursuant to 326 IAC 6-3-2 (Process Operations), the PM emissions from the Shredding and Welding operations shall be limited using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

(3) Pursuant to 326 IAC 8-9-1 (Volatile Organic Liquid Storage Vessels), the ten (10) gasoline product storage tanks with capacities less than thirty-nine thousand (39,000) are subject to the following reporting and record keeping provisions of this rule:

(a) The owner or operator of the ten (10) storage vessels shall keep all records required by this section for three (3) years unless specified otherwise. Records required by subsection (b) below shall be maintained for the life of the vessel.

(b) The owner or operator of the ten (10) storage vessels shall maintain a record and submit to IDEM, OAQ a report containing the following information of each vessel:
(1) The vessel identification number;
(2) The vessel dimensions; and
(3) The vessel capacity.

The source is being re-classified from a FESOP source into an Exemption source.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Original signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

APD

cc: File - Vanderburgh
Vanderburgh County Health Department
Air Compliance - Scot Anslinger
Southwest Regional Office
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak
Local Agency Evansville Environmental Protection Agency

Indiana Department of Environmental Management
Office of Air Quality and
Evansville Environmental Protection Agency

Technical Support Document (TSD) for a Exemption

Source Background and Description

Source Name: J. Trockman and Sons, Inc.
Source Location: 1017 Bayse Street, Evansville, Indiana 47714
County: Vanderburgh
SIC Code: 5093
Exemption No.: 163-15369-00123
Permit Reviewer: Aida De Guzman

The Office of Air Quality (OAQ) has reviewed an application from J Trockman and Sons, Inc. relating to the re-permitting of the scrap automobile metal body processing plant, due to the re-classification of the source from a FESOP source into an Exempted source. The emission units are the following:

(a) Replacement of the two (2) 750 Horsepower natural gas-fired reciprocating internal combustion (IC) engines into electric engines. These IC engines are used to power the shredder.

(b) Shredding operation, capable of shredding a maximum of 24 tons per hour;

(c) Two (2) diesel storage tanks, identified as tank no.1 and tank no. 6, each with a capacity of 250 gallons;

(d) Five (5) diesel storage tanks, identified as tank no. 2, tank no. 3 and tank no. 4, tank no. 9 and tank no.10, each with a capacity of 1,000 gallons;

(e) One (1) gasoline storage tank, identified as tank no. 5 with a capacity of 500 gallons;

(f) One (1) used oil storage tank, identified as tank no.7 with a capacity of 500 gallons;

(g) One (1) diesel storage tank, identified as tank no. 8 with a capacity of 500 gallons;

(h) Brazing, torch cutting, soldering and welding operation.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) FESOP F163-6855-00123, issued on March 10, 1997; and

(b) First Minor Revision 163-9125, issued on May 8, 1998

Recommendation

The staff recommends to the Commissioner that the re-permitting be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on December 31, 2001 with additional information received on January 9, 2002.

Emission Calculations

(a) Electric Internal Combustion Engines:
These engines are used to power the shredder. There are no emissions from electric.

(b) Shredding Operation:
There are no emission factors available in the AP-42 for automobile metal body shredding operation. The emission factor used in the calculations came from the "Industry Scrap Recycling Institute (ISRI)".

	Shredding Operation		
Pollutant	Maximum Throughput (ton/hr)	Emission Factor (lb/ton)	Emissions (tons/yr)
Particulate Matter (PM/PM10)	24	0.00257	0.27
VOC	24	0.00136	0.143
Lead	24	8.73×10^{-5}	0.009

(c) Ten (10) Storage Tanks (Total capacity of 7,000 gallons):
The total VOC emission from the tanks is too insignificant that the Tanks Program 4.0 spreadsheet cannot quantify it.

(d) Brazing, Torch Cutting, Soldering, and Welding Operation:

Type of Wire Used	Maximum amount of Wire Used (lb/yr)
E6011	8,970
E6012	3,820
E7018	3,310

Note: The wire used is based on 8760 hours/yr.

TABLE 1

Pollutant	Emission Factor ($lb/10^3$ lb)	Emissions (tons/yr)	Emission Factor ($lb/10^3$ lb)	Emissions (tons/yr)	Emission Factor ($lb/10^3$ lb)	Emissions (tons/yr)	Total Emissions (tons/yr)
	E6011		E6012		E7018		
Particulate Matter (PM/PM10)	38.4	0.17	8.0	0.015	18.4	0.03	0.22
Cobalt	0.01	4.48×10^{-5}	-	0.0	0.01	4.48×10^{-5}	8.9×105^{-5}
Manganese	9.98	0.045	-		10.3	0.017	0.062
Nickel	0.05	2.2×10^{-4}	-		0.02	3.3×10^{-5}	2.5×10^{-4}

Note: Above welding emission factors were taken from the AP-42 Table 12.19-2.

Methodology:
Emissions = throughput, lb/yr * lb/1000 lb * ton/2000 lb

TABLE 2

TORCH CUTTING		
Pollutant	Emission Factor (lb of PM//hr cutting time)	Emissions (tons/yr)
Particulate Matter (PM/PM10)	0.06	0.26

Note: Above torch cutting emission factor was taken from the "Industry Scrap Recycling Institute (ISRI)", since there are no available emission factor in the AP-42.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	0.75
PM-10	0.75
SO_2	0.0
VOC	0.143
CO	0.0
NO_x	0.0

HAP's	Potential To Emit (tons/year)
Cobalt	8.9×105^{-5}
Manganese	0.062
Nickel	2.5×10^{-4}
Lead	0.009
TOTAL	0.071

Justification for Approval Level

(a) Pursuant to 326 IAC 2-1.1-3, the source will be issued an Exemption, since the potential to emit (as defined in 326 IAC 2-7-1(29)) of Particulate Matter (PM) or Particulate Matter with an aerodynamic diameter less than ten (10) micrometers (PM10), and the potential to emit of Lead is less than two-tenths (0.2) tons per year.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2000 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	1.0
PM-10	1.0
SO_2	0.0
VOC	1.0
CO	17.0
NO_x	3.0
HAP (specify)	0.0

The actual emissions were due to the combustion of natural gas from the two (2) internal combustion engines (IC), which power the shredder. These natural gas engines are now being replaced with electric engines.

Source Status/Limited Potential to Emit

Existing re-permitted source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity).

	Limited Potential to Emit (tons/year)							
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	Single HAP	Combined HAPs
Shredding	0.27	0.27	0.0	0.143	0.0	0.0	0.009	0.009
Welding	0.22	0.22	0.0	0.0	0.0	0.0	0.062	0.0623
Torch Cutting	0.26	0.26	0.0	0.0	0.0	0.0	0.0	0.0
Total Emissions	0.75	0.75	0.0	0.143	0.0	0.0	0.071	0.071

(a) This existing re-permitted source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

County Attainment Status

The source is located in Vanderburgh County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
Ozone	maintenance
CO	attainment
Lead	not determined

(a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Vanderburgh County has been designated as maintenance for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Vanderburgh County has been classified as attainment or unclassifiable for all the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)
This existing source was issued a FESOP F163-6855-00123 on May 10, 1997. However, the source had replaced their main emission units, two natural gas-fired internal combustion engines into electric engines. Due to this change the source is no longer subject to the Part 70 Permit Program requirements because the new potential to emit (PTE) of:
(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

The source is being re-classified from a FESOP source into an Exemption source.

Federal Rule Applicability

(a) New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60)
(1) 40 CFR Part 60.110b, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels). This rule applies to each storage vessel with a capacity greater than or equal to 40 cubic meters (m^3)(10,567 gallons) that is used to store volatile organic liquids (VOL's) for which construction, reconstruction, or modification is commenced after July 23, 1984.

The ten (10) fuel oil storage tanks are not subject to this NSPS because the capacity of each tank is less than 10,567 gallons.

(b) There are no other New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(c) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

(a) 326 IAC 5-1 (Visible Emissions Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in this permit:

(1) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6)

minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

(a) 326 IAC 8-1-6 (General Reduction Requirements)
The Shredding Operation is not subject to 326 IAC 8-1-6, because its VOC potential emission is less than 25 tons per year.

(b) 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
This rule applies to all petroleum liquid storage vessels with capacities greater than one hundred fifty thousand (150,000) liters (thirty-nine thousand (39,000) gallons) containing VOC whose true vapor pressure is greater than 10.5 kPa (1.52 psi).

The ten (10) petroleum storage tanks are not subject to this rule, because not one tank has a capacity of 39,000 gallons or more.

(c) 326 IAC 8-9-1 (Volatile Organic Liquid Storage Vessels)
This rule applies to stationary VOL vessels with a capacity of less than thirty-nine thousand (39,000) are subject to the following reporting and record keeping provisions of this rule:

(1) The owner or operator of the ten (10) storage vessels shall keep all records required by this section for three (3) years unless specified otherwise. Records required by subsection (2) shall be maintained for the life of the vessel.

(2) The owner or operator of the ten (10) storage vessels shall maintain a record and submit to IDEM, OAQ a report containing the following information of each vessel:
(i) The vessel identification number;
(ii) The vessel dimensions; and
(iii) The vessel capacity.

(d) 326 IAC 6-3-2 (Process Operations)
This rule mandates a PM emission limit from the Shredding and Welding operations using the following equation:

Interpolation and extrapolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Conclusion

The re-permitting of this scrap automobile metal body processing plant shall be subject to the conditions of the attached Exemption **163-15369-00123.**